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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,029	12/14/2000	Raymond B. Edelman	7784-000130	7897

7590 11/26/2003

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EXAMINER

TUDOR, HAROLD JAY

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application <u>09/737,027</u>	Applicant(s) <u>E delman</u>	
	Examiner <u>Tudor H.V</u>	Art Unit <u>3641</u>	Confirmation No.

- The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address -

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 6 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is FINAL. ☐ This action is non-final.
- ☐ Since this application is in condition for allowance except for the formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 456, 458, 459, 18-188.

Disposition of Claims

- ☐ Claim(s) 1-12, 14-25 is/are pending in this application.
- Of the above claim(s) 4, 12, 17 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-3, 5-11, 14-16, 18-25 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved or ☐ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.
- ☐ The drawing(s) filed on _____ is/are ☐ accepted or ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d) or (f).
 - ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received:

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - ☐ The translation of the foreign language provisional application has been received.
- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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1. Applicant's has elected, without traverse, Species A. Claims 1-3, 5-11, 14-16, 18-25 read on the elected species. Claims 4, 12 and 17, drawn to the non-elected species, have been canceled.

2. The disclosure is objected to because of the following informalities: In line 1 of claims 12 and 19-25, --ignition subsystem—should be substituted for "detonation system".

Appropriate correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-11, 14-16 and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Winfree et al 6,439,503 or Bussing et al in view of Shann.

Both Winfree et al and Bussing et al disclose the invention substantially as claimed. Both Winfree et al and Bussing et al disclose multiple chamber detonation wave combustors which are ignited by lasers. However, Winfree et al and Bussing et al do not disclose laser ignition subsystem for distributing laser energy to the chambers. Since Winfree et al and Bussing et al do not disclose a specific laser ignition subsystem, one having ordinary skill in the art at the time the invention was made would have been motivated to look to the prior art for a specific laser ignition subsystem. Shann teaches a laser ignition subsystem comprising a laser source 3, means for separating the laser energy into different paths and optical fibers forming the paths.

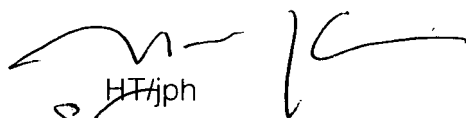
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It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the Shann laser ignition subsystem in either the Winfree et al device or the Bussing et al device to distribute the laser energy to the detonation chambers. It would have been an obvious design choice to one having ordinary skill in the art at the time the invention was made to vary the time of detonation of the banks and the chambers within the banks and the intensity of the laser energy to achieve a desired result.

5. Winfree et al 5,615,548 and Hunter are cited as being of interest in that they disclose detonation wave combustors.

6. Hendrix and British Patent 2,063,964 are cited as being of interest in that they disclose laser ignition systems.

7. Any inquiry concerning this communication should be directed to Harold Tudor at telephone number (703) 306-4198.


HT/jph
11/19/03


HAROLD J. TUDOR
PRIMARY EXAMINER